In the Claims:

Please amend the claims as follows:

1. (currently amended) A method for imaging characteristics of an object with a measuring system, the method comprising:

moving at least one of the measuring system and the object in relation another of the measuring system and the object in a predefined direction of movement,

moving the object in relation to the measuring system,

illuminating the object with incident light, which has limited extension in the direction of movement, wherein the incident light strikes the object at a predetermined distance from an imaging sensor viewed in the direction of movement of the object,

detecting light reflected from the object with the imaging sensor arranged on a same side of the object as the incident light,

detecting with the imaging sensor light scattered in the object simultaneously with detecting the reflected light,

converting the detected reflected light and scattered light into electrical charges with the image-processing sensor,

creating a digital representation of the object from the electrical charges, wherein the digital representation is divided into rows and columns, and

simultaneously reading out from the digital representation information on a geometric profile of the object by detecting a position of the reflection of the incident light in a given column on the imaging sensor and information on the light scattered in the object in the direction

of movement in a predetermined area around the profile based upon a shape of the digital representation of the incident light over a number of sensor rows.

2. (currently amended) The method according to claim 1, further comprising:

~~dividing the digital representation into rows and columns, and~~

creating a compressed image from the digital representation by reducing the number of rows.

3. (previously amended) The method according to claim 2, further comprising:

reducing the number of rows by summation of the rows of the digital representation in columns in a predetermined order.

4. (original) The method according to claim 3, wherein the summation is performed by analog means.

5. (original) The method according to claim 3, wherein the summation is performed by digital means.

6. (previously amended) The method according to claim 3, further comprising:

saving for each column in the summation by columns information on the row at which the electrical charge exceeds a predetermined threshold value, indicating that reflected light is detected just in that row.

7. (original) The method according to claim 2, wherein the compressed image is created by saving for each column the maximum value for the pre-selected rows.

8. (previously amended) The method according to claim 1, further comprising:

reading out from the digital representation information on an intensity distribution in addition to information on the geometric profile of the object and the light scatter.

9. (currently amended) An arrangement for representing the characteristics of an object with a measuring system in which either the measuring system or the object is configured to move in relation to one another in a predefined direction of movement, the object being designed to move in relation to the measuring system, the arrangement comprising:

at least one light source configured to illuminate the object with a light that is incident upon the object and has a limited extension in the direction of movement, wherein the incident light strikes the object at a predetermined distance from an imaging sensor viewed in the direction of movement of the object,

an imaging sensor arranged on a same side of the object as the light source and configured to pick up light reflected from the object and simultaneously pick up light scattered in the object and to convert the picked up reflected light and scattered light into electrical charges, and

an image-processing unit configured to create a digital representation of the object from said electrical charges, wherein the digital representation is divided into rows and columns,

wherein the light source is arranged at a predetermined distance from the imaging sensor viewed in the direction of movement, and wherein the image-processing unit is configured to

simultaneously read out information on a geometric profile of the object by detecting a position of the reflection of the incident light in a given column on the imaging sensor and information on the light scattered in the object in the direction of movement in a predetermined area around said profile based upon a shape of the digital representation of the incident light over a number of sensor rows.

10. (currently amended) The arrangement according to claim 9, ~~wherein the digital representation is divided into rows and columns and~~ wherein the image-processing unit is configured to create a compressed image from the digital representation by reducing the number of rows.

11. (previously amended) The arrangement according to claim 10, wherein the image-processing unit is configured to reduce the number of rows by summation of the rows of the digital representation in columns in a predetermined order.

12. (previously amended) The arrangement according to claim 11, wherein the image-processing unit is configured, in the summation by columns, to save for each column information on the row at which the electrical charge exceeds a predetermined threshold value, indicating that reflected light is detected in that row.

13. (previously amended) The arrangement according to claim 9, wherein the incident light comprises linear light.

14. (previously amended) The arrangement according to claim 9, wherein the incident light comprises a plurality of points or linear segments.

15. (previously amended) The arrangement according to claim 10, wherein the image-processing unit is configured to create the compressed image by saving for each column the maximum value for the pre-selected rows.

16. (previously amended) The arrangement according to claim 9, wherein in addition to information on the geometric profile of the object and the light scatter, the image-processing unit is also configured to read out information on an intensity distribution from the digital representation.